

# NATURAL HISTORY MISCELLANEA

Published by  
**The Chicago Academy of Sciences**

Lincoln Park . 2001 N. Clark St., Chicago 14, Illinois

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No. 61

June 7, 1950

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## An Undescribed *Delphinium* from the Cordillera Oriental of Mexico

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The flora of the Sierra Madre Oriental of Mexico will doubtless continue to engage the interest of the plant geographer for years to come. Separated from the botanically better known Sierra Madre Occidental to the westward by the Mesa del Norte, the eastern cordillera stands between the *nodus* of mountains centering about San Luis Potosi to the south and the much more distant but related Edwards Plateau of Texas, the Arbuckle Mts. of Oklahoma, the Ozark-Ouichita Highlands of Missouri and Arkansas. Milton Hopkins has enumerated the more distinctive species of the Arbuckle Mts. (1938, 1939). Perhaps the most striking species of this Arbuckle flora is *Juniperus mexicana* which reaches as far northeastward as the Ozarks. The nearly continuous exposure of Cretaceous limestones along this axis is significant. *Delphinium disjunctum* described here evidently belongs to this floristic alliance. Up to now *Delphinium treleasei* of the Ouichita Highlands has occupied an anomalous position among North American larkspurs. In my synopsis of the genus in North America (1945, p. 65), I referred to *Delphinium treleasei* as a biologically senescent relic endemic, and placed it in the Longicalcarate Series along with the ten Mexican species generally characterized by having long slender spurs. *Delphinium disjunctum* is of particular interest because it comes from the Sierra Madre Oriental at a point lying between the ranges of the other ten Mexican species and the outlying *D. treleasei* of the Ouichita Highlands. Like the other species known from scattered limestone stations in the United States and enumerated by Hopkins, *Delphinium disjunctum* is reported by the collectors as growing on limestone outcrops.

From *Delphinium valens* Standley, the only other species known from the Sierra Madre Oriental of Nuevo Leon at higher elevations, *D. disjunctum* differs not alone in its morphology, but in its natural habitat. *Delphinium valens* is known from "just below timberline" where it grows in moist grassy openings in the pine forest; *D. disjunctum*, on the other hand, from borders

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of moist rivulets along mountain ravines, considerably below timberline. *Delphinium valens* is presumably related, judging from the very limited evidence at hand, to the rare timberline *D. alpestre* of the Rocky Mountains of Colorado; *D. disjunctum*, as suggested above, to the epibiotic species (in Ridley's sense) of the limestone axis extending to the Ouichita Highlands. *Delphinium valens* was taken in Nuevo Leon at a point about sixty-five airline miles north of the station for *D. disjunctum*.

I am grateful to David J. Rogers of the Missouri Botanical Garden, St. Louis, for the opportunity to study this material.

*Delphinium disjunctum* n. sp.

Tall slender perennial from a short "rhizomatous" rootstock, the stems erect, 1.0-1.5 m. tall, evidently strict, fistulous, leafy from near the base, glabrous and a little glaucous up to the cano-strigulose raceme; leaves principally cauline, the lowermost withered and cast before flowering, petioles spreading, 7-12 (or lowermost 16) cm. long, all the blades rather thin, brown-venulose, palmatisect into 5 narrowly cuneate principal divisions, the mid-cauline blades 11-12 cm. wide, the uppermost floral pentisect but not much reduced over the lower leaves, all the divisions lacerate for the distal 1/2 or 1/3 of the blade into narrow acuminate teeth, ciliate and sparsely hairy above, subglabrous to strigulose beneath with white curling hairs along the veins; racemes paniculate below, elongating early, the pedicels all prominent, 10-12 mm. long at anthesis, the bracts acicular, persistent, 1/2-2/3 as long as the pedicels, flowers small, blue, the sepals rhomboidal or broadly ovate, merely acute, 8-10 mm. long, 5-6 mm. wide, the veins distinct, ciliate and closely cano-puberulent on the back, densely so toward the thickened summit, the spur stout 7-8 (or 8.5) mm. long, only a little arcuate; limb of lower petal broadly ovate, densely hairy, bifid, the lobes rounded, sinus open, 1.5 mm. deep; upper petals clavate-oblong, a little crisped, merely retuse; stamens glabrous; immature follicles thinly strigulose, 12 mm. long, cusp thin, erect, 1.5 mm. long; seeds unknown.

Herba perennis caulibus altis, gracilibus, 1.0-1.5 m. altis, inferioribus glabris atque glaucis, superioribus cano-strigulosis; foliis imprimis caulibus, omnibus submembranaceis, palmatisectis segmentis auguste cuneato-obovatis, principiis 11-12 cm. latis; racemis paniculatis, ramis inferioribus elongatis atque divaricatis, pedicellis distincte bracteis persistentibus, subulatis, floribus parvibus, azureis, sepalis rhomboideis vel late ovatis, vix acutis, 8-10 mm. longis, 5-6 mm. latis, distincte venulis, extus cano-puberulentibus dense ad apicem, calcar breve, subrectum, 7-8 mm. longum; petalis inferioribus late ovatis, dense hirsutis, bifidis, sinus apertus, 1.5 mm. profundus; petalis super-

ioribus clavato-oblongis, paulum crispatis vix emarginatis; staminibus glabris; folliculis immaturis rare strigulosis, 12 mm. longis; seminibus ignotis.

Type from along small rivulet on limestone outcrops, Cerro del Viejo, 2500 m., 15 mi. west of Dulces Nombres, Sierra Madre Oriental, Municipality Zaragoza, Nuevo Leon, Mexico, August 19, 1948, *F. G. Meyer and D. J. Rogers* 3019 (Missouri Botanical Garden; isotype, Tulane University Herb.).

*Delphinium disjunctum* would be sought in my key to the Mexican species of larkspurs (1945, p. 95) near *D. barrancae*. But the present species has a much shorter spur and the leaves have much narrower primary divisions. In fact, the leaves suggest *D. ramosum* of the central Rocky Mts. (cf. *l.c.* fig. 35) and the raceme, too, recalls that species. Indeed, *D. disjunctum* with its short spur and small flowers more nearly approaches the Ceratophylloid Series than it does the Longicalcarate Series, and its relationship may yet prove to rest with that alliance.

#### Comparison of Two Delphiniums from Montane Nuevo Leon

<i>D. disjunctum</i>	<i>D. valens</i>
<i>Habit</i> slender, stem little if at all fistulous, the leaves scattered.	<i>Habit</i> stout, stem fistulous, the leaves close-set.
<i>Racemes</i> elongating, paniculate below, not congested, borne well above foliage, the rachis hairy but not glandular.	<i>Racemes</i> short, congested, invested by overtopping leaves, the rachis densely glandular-hairy.
<i>Flowers</i> blue	<i>Flowers</i> dark blue-purple
<i>Sepals</i> merely acute	<i>Sepals</i> acuminate
<i>Sinus</i> of lower petals open, 1.5 mm. deep	<i>Sinus</i> of lower petals closed, 3 mm. deep
<i>Flowering date</i> August 19	<i>Flowering date</i> July 15 — Aug. 15

The two species are alike in having venulose leaves, small flowers with venulose sepals, short spur and included upper petals. Ripe follicle collections of both species should be particularly sought.

#### LITERATURE CITED

- Ewan, J.  
 1945      Synopsis of the North American *species* of *Delphinium*. Univ. Colo. Studies series D, vol. 2, no. 2, p. 55-244, 58 fig.
- Hopkins, Milton  
 1938      Isolation of plants in the Oklahoma flora. Proc. Okla. Acad. Sci., **vol.** 18, 1937, p. 17-20.
- 1939      Phytogeographical notes on the Arbuckle Mountains of **Oklahoma**. *Amer.*

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H. K. Gloyd, Director.

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